

Big River Journey Classroom Activity: Watersheds, Stewardship

The EnviroScape

Objective: Student groups will conduct and evaluate results of two experiments to demonstrate (1) how water pollution happens and (2) how to prevent it.

Grade level/ time req't: K-12 options; one or more 20-45 minute sessions

Materials:

The “EnviroScape” is a watershed kit that includes all necessary parts and materials, including a detailed, easy-to-follow user’s guide.

To obtain the EnviroScape (“Enviro II”):

- Call Minnesota Valley National Wildlife Refuge Resource Librarian at 952-858-0731.
- Call Project WET (Minnesota DNR) at 651-259-5706.
- Contact National Park Service at 651-290-3030, x-244 (Abby) or x-297 (Brian)

It will be your responsibility to pick up and return the EnviroScape **cleaned**, complete, organized, and undamaged! You may also need to supply own additional kool-aid or other “pollutants.”

Introduction:

See EnviroScape User Guide, pp. 15-17, and 21, for setting the stage. Discuss the meaning of pollution, waterbodies, and watersheds; identify that everyone lives in a watershed and that we can prevent water pollution wherever we live. Discuss “point source” pollution and “nonpoint source (runoff) pollution” (information in User Guide.)

Summary of procedure (see User Guide for complete instructions):

- 1) Prepare the model (add buildings, trees, vehicles, etc.; put drain plug in water body.)
- 2) Introduce concepts of watersheds and water pollution.
- 3) Demonstrate “point” and “nonpoint” pollution, and observe results (User Guide, p. 12+).
- 4) Discuss what happens when it rains, storm drains (which drain directly to waterbodies), and home and neighborhood pollution sources.
- 5) Discuss ideas of how to prevent water pollution (User Guide, p.40+).
- 6) Demonstrate methods of pollution prevention, also called “Best Management Practices.”
- 7) Discuss results.
- 8) Clean, dry and repack model (see User Guide instructions, p.63-64).

Evaluation:

Writing and drawing pictures about water pollution and how to prevent it are suggested.